REMARKS / DISCUSSION OF ISSUES

Claims 1-19 are pending in the application. Claims 1 and 10 are independent claims. Claims 10-19 are new. Because Applicants have not exhausted their allotment of claims/independent claims per the basic filing fee, Applicants believe that no fees are due.

Unless indicated to the contrary, claims are amended to replace European-style phraseology with phraseology more suitable for US practice. No new matter is submitted through amendments/new claims.

Rejections under 35 U.S.C. § 102

Claims 1-9 were rejected under U.S.C. § 102(b) as being anticipated by *Borner, et al.* For at least the reasons set forth herein, Applicants respectfully submit that the rejection is improper.

Applicants rely at least on the following standards with regard to proper rejections under 35 U.S.C. § 102. Notably, a proper rejection of a claim under 35 U.S.C. § 102 requires that a single prior art reference disclose each element of the claim. *See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983). Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. *See, e.g., In re Paulsen,* 30 F.3d 1475, 31 USPQ2d 1671 (Fed. Cir. 1994); *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Cir. 1990). Alternatively, anticipation requires that each and every element of the claimed invention be embodied in a single prior art device or practice. *See, e.g., Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992). For anticipation, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *See, e.g., Scripps Clinic & Res. Found. v. Genentech, Inc.*, 927 F.2d 1565, 18 USPQ2d 1001 (Fed. Cir. 1991). Finally, it is well-established that the initial burden of establishing a rejection for anticipation rests with the Office. To

wit, the statute states that a person is entitled to a patent unless the conditions of anticipation are met.

Claim 1 is drawn to a color-mixing lighting system and includes:

a light-emitting diode emitting first visible light having a first peak wavelength in a first spectral range,

a fluorescent material converting a portion of the first visible light into second visible light having a second peak wavelength in a second spectral range,

the second visible light having a full width at half maximum (FWHM) of at least 50 nm.

The Office Action directs Applicants to lines 3-6 of the Abstract and Fig. 2 for the alleged disclosure of the FWHM of the second visible light as recited in claim 1. Lines 3-6 describe a converter that converts part of the visible light emitted by one of the diodes into visible light in a further wavelength range so as to optimize the color rendition of the lighting system. Fig. 2 is a graph of the transmission spectrum, with transmission (in arbitrary units) as a function of wavelength of visible light for a combination of blue and red LEDs. The wavelengths of spectral maxima are shown for the components of the red, blue and the luminescent material are shown.

As is known, the FWHM is an expression of the extent of a function, given by the difference between the two extreme values of the independent variable at which the dependent variable is equal to half of its maximum value. The FWHM of the component of components of light of an embodiment are described in connection with Fig. 3A, where, for example a red luminescent material has a FWHM of 83 nm at a peak of 610 nm.

While Applicants note that the FHWM could be applied to many graphical functions, it is not clear from the graph of Fig. 2 of the applied reference what the FHWM is. Respectfully, Applicants submit that the featured FHWM of *the second visible light having a full width at half maximum (FWHM) of at least 50 nm* is not disclosed as the Office Action alleges. Therefore, because the applied art fails to disclose at least one feature of claim 1, a *prima facie* case of anticipation has not been made. As

such, claim 1 is patentable over the applied art. Moreover, claims 2-9, which depend from claim 1 immediately or ultimately, are patentable over the applied art for at least the same reason.

New claims

Claim 10 is drawn to a color-mixing lighting system and features:

a light-emitting diode emitting first visible light having a first peak wavelength in a first spectral range;

a luminescent material converting a portion of the first visible light into second visible light having a second peak wavelength in a second spectral range, *wherein the color-mixing lighting system has a color-rendering index of at least 90.*

Applicants respectfully submit that the applied art fails to disclose or suggest at least the noted feature of claim 10. Thus, claim 10 is believed to be allowable over the applied art, and claims 11-19 are allowable for at least the same reasons.

Conclusion

In view the foregoing, applicant(s) respectfully request(s) that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies to charge payment or credit any overpayment to Deposit Account Number 50-0238 for any additional fees, including, but not limited to, the fees under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17.

If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted on behalf of:

Phillips Electronics North America Corp.

/William S. Francos, Esq. /

by: William S. Francos (Reg. No. 38,456)

Date: December 21, 2007

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